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TBiRD

TERABYTE INFRARED DELIVERY

NASA's TeraByte InfraRed Delivery (TBIRD) system is showcasing unprecedented communications capabilities that can enhance the way future science and exploration missions communicate data to and from Earth. As science instruments evolve, missions will need advanced ways to transmit data to Earth. TBIRD is a small satellite demonstrating a laser communications downlink at 200 gigabits per second.

Traditionally, missions have used radio frequency to send data to and from space. The infrared light used for laser communications packs the data into significantly tighter waves than radio, meaning ground stations can receive more data at once. More data yields more information and discoveries.

TBIRD is a payload on the Pathfinder Technology Demonstration 3 mission and will be launched from Cape Canaveral Space Force Station on SpaceX's Transporter-5 Rideshare mission which will use a Falcon 9 rocket to launch multiple small satellites. The TBIRD mission is planned to operate for six months in low-Earth-orbit but is expected to last much longer and will continue NASA's laser communications infusion.

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